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AN AURAL MASSEUR.

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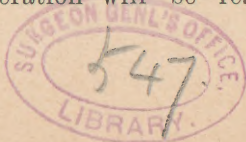
BY CHEVALIER JACKSON, M.D.

The accompanying illustration shows an instrument which has yielded me splendid results in the treatment of non-purulent middle-ear disease during almost three years. Until I devised it, I scarcely knew what to do with the class of cases that come with a story something like this: "Doctor, I came to see if you could do anything for me. I am hard of hearing and have annoying noises in my ears. I am told that both my throat catarrh and Eustachian catarrh have been cured. My general health is good. Yet my trouble is growing worse. I have a bag and have Politzerized myself until I am sick of it. I seem to have gotten all the benefit that it will yield me. Can you do anything for me, Doctor?"

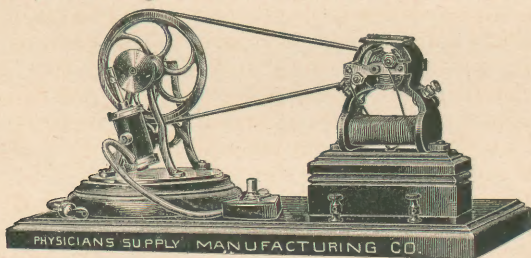
I had often been at "my wits' end" trying to suggest or do something that had not already been suggested or done in such cases. But for nearly three years past I have been able, with the aid of the instrument illustrated, to get results that seemed marvelous considering the obstinacy and chronicity of this class of cases.

The action of the instrument is practically on the principle of pneumatic massage. I used to apply pneumatic massage by means of either a Sieglé speculum or a bit of rubber tubing—in either case operated by the mouth; rather an indelicate procedure. Then I tried operating them with a syringe. I have also used the Delstanche. But with none of these did I get anything like the results that I have since obtained from the use of this masseur.

Its construction and operation will be readily



understood from the following description, by reference to the cut: it consists essentially of a cylinder oscillating on a central pivot, and within this cylinder a piston moved up and down, by being connected with a revolving crank disk. Motion is imparted to the masseur by a small electric motor run by a battery, storage cell, lighting circuit or other source of electricity. It might be operated by a crank arrangement. A rubber tube leads from the bottom of the cylinder and ends in an ear piece to be inserted in the external auditory meatus of the patient. When the instrument is set in motion, the moving up and down of the piston within the cylinder causes a to-and-fro motion of the column of air confined in the tube and meatus, resulting in a to-and-fro motion of the mem-



brana tympani and ossicula. And if we start on the exhaust stroke, with the plunger down, the first half of each revolution of the crank disk will draw the membrana tympani outward, and the second half of each revolution will release it and allow it to resume its former position. When operated in this way, by starting on the exhaust stroke, the result is not simply the *to-and-fro* motion of the membrana tympani, but is an alternate *withdrawal* and release. Considering the pathologic conditions present, to this may be attributed the very much better results from this instrument than are obtained from the Delstanche or Sieglé. However, be the true reason what it may, there can be no question as to the fact that the results *are* better. The ear piece is placed at an air-

tight fit into the meatus, and the energy of action regulated by placing the crank pin in one or another of the holes in the crank disk. These holes vary in the distance of their location from the axis of the shaft; the farther the crank pin from the axis, the longer (therefore the more energetic) the stroke. The energy of action could be regulated by making a more or less tight fit of the ear piece in the meatus, but if this is resorted to the exhausting action is lost and this I think, is a disadvantage. A very mild action has given me the best results.

It has seemed most advantageous to apply the masseur every alternate day, sittings of thirty seconds to a minute duration, the masseur making from one hundred to one hundred and fifty revolutions to the minute. Knowing well how treacherous is enthusiasm I have refrained from publication until the instrument had been fairly and faithfully tried and the permanency of the results observed. As this has covered a period of two years and ten months, the present writing will seem not unduly hasty and the results entitled to be considered mature.

The word "benefited" is meant to include both relief of tinnitus and increase of hearing distance. In many cases the relief of both these symptoms was so marked and so immediate from a single sitting that the patient was greatly delighted. In some cases the results were but slight at first and increased at each subsequent sitting, while in other cases the benefit only appeared after a number of applications. Psychic effect was marked; patients were fascinated. But great care was taken to eliminate error from this in the records, which are of the cases of my own and those of Shirils Jackson.

Here is a resumé of my results:

Total number of ears treated	100
Number of ears treated that were better than c.-34	61
Number of the latter benefited	46
Number that could only hear watch on contact	39
Number of the latter benefited	19
Percentage of benefit in cases better than contact75
Percentage of benefit in cases not better than contact48
Percentage of benefit in all the cases65

Cases that could only hear on pressure, not on mere contact, were not isolated in the records.

Unlike Politzerization the application is not disagreeable to the patient and is readily applied to any one, regardless of the ability to swallow water at command. Children do not object to its repetition, and it has yielded good results in a few cases when promptly used in ear trouble following acute diseases.

Taking it all in all, my results have been much better since adding this instrument to my armamentarium.



